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JPRS Report

Telecommunications

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AUSTRALIA

ISDN Introduced in Australia 10 Aug

AN890333 Chichester INTERNATIONAL TELECOMMUNICATIONS INTELLIGENCE in English 1 Sep 89 pp 2-3

[Report: "ISDN Becomes a Reality"]

[Excerpts] ISDN became a reality in Australia on August 10th, when Mrs Ros Kelly, minister for telecommunications and aviation support, and Mr Mel Ward, managing director of Telecom Australia, announced the launch of Telecom's ISDN Macrolink Commercial Service in Canberra.

To be known under the commercial name Macrolink, it will be a Primary Rate Service (30 B+D), aimed at the large business user. The ISDN network will originally consist of eight Ericsson AXE exchanges, with two in Melbourne and two in Sydney, and one each in Canberra, Brisbane, Perth, and Adelaide, respectively.

ISDN manufacturers whose equipment has been accepted by Telecom for connection to the network include GPT's ISDX and Ericsson's MD110. Philips' Sopho-S is expected to receive approval sometime in 1990.

The Macrolink service is the result of intensive development and testing by Telecom, including:

- network and operations trials—an internal testing of all aspects of the network, including operations;
- suppliers' trials—where CPE suppliers were allowed to evaluate the equipment on the ISDN network;
- telecom and ISDN customer trials—allowing major companies to evaluate ISDN under field trial conditions, leading up to the availability of the commercial service.

Thirteen leading Australian companies and organisations took part in the trials. These included all four major banks—the ANZ, the Commonwealth, Westpac, and the National Australia Bank; the Department of Defence; a major utility—Australia Gas Light; Digital Equipment Corp; ICI; and leading suppliers—Telecom Advanced Communications Services/Fujitsu, Ericsson, NEC, J-tec and GEC-Plessey.

Trial applications involved voice and data networking, video, file transfer, money market, LAN gateway, integrated access, group four fax and a range of supplementary services.[passage omitted]

Although ISDN provides integrated access to a wide range of services within the network, it also gives access to the other external networks such as the Public Switched Telephone Network (PSTN), Austpac, Telex, Teletex and Faxstream. Subscribers to ISDN will retain their present capabilities in PABX systems, with an increased choice for additional services through ISDN.

Although Telecom Australia claims that ISDN Primary Rate introduction is unique to Australia as the first ISDN service rate, this is not entirely true. Both the UK and the US have introduced their Primary Rate services first, with the promise of Basic Rate services to follow. Basic Rate in Australia will be marketed under the name Microlink. Telecom ISDN Manager, Ms Val Kangsanant, stated recently that "in the near future, ISDN Microlink (2 B+D) will be introduced to complete the 'last kilometre' of corporate networking to smaller branches and to extend the service to the general business and domestic sectors." The Base Rate service is expected to begin in mid-1990.

The Telecom ISDN separate control channel, the D channel, will allow users to arrange for either a given service, a mix of services, or a reconfiguration of service mix to suit particular traffic needs. By developing Telinc (Australia ISDN Private Network Protocol), Telecom created a D channel protocol to network several different manufacturers' PABXs within the ISDN network. But so far, Fujitsu seems to be the only company committed to this protocol. Ericsson has agreed in principle, but has given no firm date to their promise, and the other manufacturers will probably remain with DPNSS1, a signalling protocol recently demonstrated by GPT's ISDX and Philips' Sopho-S PABXs.[passage omitted]

CAMBODIA

Broadcast Transmitter Built in Kompong Som City

BK2010094589 Phnom Penh SPK in French 0402 GMT 20 Oct 89

[Text] Phnom Penh, 20 October (SPK)—With the assistance of the Soviet Union, a broadcasting transmitter is under construction in the township of Kompong Som city, 250 km southwest of Phnom Penh.

The construction, which is costing about 350,000 rubles, is 80 percent completed. The station will broadcast programs on the medium wave at 20 kw and will also serve as a relay for Phnom Penh radio.

LAOS

Automated Telecommunications Link To Be Set Up Between Vientiane, Provinces

BK0810073089 Vientiane Domestic Service in Lao 0000 GMT 7 Oct 89

[Text] In the near future, an automated telecommunications link will be set up between Vientiane Capital and the provinces of Luang Prabang, Oudomsai, Savannakhet, Khammouane, and Champassak with gratis aid from the Australian Government, valued at Australian $1.7 million, and loans acquired for the second stage from the World Bank, valued at U.S. $4.625 million.

The telecommunications system consists of telephones, teleprinters, telegraphs, and facsimile equipment, which will provide around-the-clock service to the public through automated equipment.

Construction of this telecommunications system is divided by the Central Postal Company into two stages.

Upon completion of the first stage of installation, scheduled for March 1990, seven channels each for telephone and telegraph services will be available for use for 1,032 lines. The channels can be subsequently increased to 15 and 20 for the respective services in the future.

Upon completion of the second stage, 10,000 lines will be available by 1993 and 1994.

INDIA

Paper Reports Developments in Satellite Technology

Space Chairman Interviewed

46001018z Madras THE HINDU in English 8 Sep 89 p 10

[Text] Madras, Sept 7—The third flight of the Augmented Satellite Launch Vehicle (ASLV) from Sriharikota is expected to take place "in the next 12 months," according to Dr U. R. Rao, chairman, Indian Space Research Organisation.

In an interview to THE HINDU here, he said the ASLV flight would undergo modifications to improve its controllability. The second developmental mission to ASLV, which took place on July 13, 1988, failed because the control of the vehicles was lost. "We had severe winds last time and the strap-on booster motors worked one second less than specified. Basically, the control has to take care of such things in a solid engine unlike a liquid engine which cannot be cut off at the right time. However, the controls were not strong enough. We have to improve the control margins. We expect the flight in the next 12 months," he said.

PSLV flight: The Polor Satellite Launch Vehicle (PSLV) flight would take place in the beginning of 1991. Some of the technological problems with regard to launching the gigantic PSLV had been solved. It will launch a 1,000-kg remote-sensing satellite. "We will have a major test in Sriharikota in a month or so. It will be the last static firing of the 125-tonne solid propellants of PSLV's first stage. We have solved the problems of casting and curing of the propellants. Now the ground test of the first stage is awaited."

The second, third and fourth stages have been successfully tested a number of times. "If the first stage goes through next month, we will progress very fast," he said.

On whether ISRO planned to send an Indian cosmonaut to the Soviet Mir space station, he said there were no such plans. But India would conduct scientific and application experiments on board Mir. "We are talking about it because the cost will be less. But right now, all attention is on ASLV, PSLV and the second generation INSAT."

Asked what kind of experiments would be conducted on board Mir, he said, "Some of these things need to be firmed up. It is a long-time programme."

INSAT programme: The second-generation INSAT satellites were under production at the ISRO satellite centre, Bangalore. They would be heavier than the first generation INSAT. The first generation consisted of 1A, 1B, 1C and 1D. All of them were made by Ford Aerospace and Communication Corporation, the U.S. But the second generation would be made in India, he declared. He said INSAT-1D would be launched between March and June next year. Its launch from Cape Canaveral was postponed some months ago after a crane-hook damaged the satellite when it was being mated with the Delta vehicle.

Dr Rao said the antenna of the INSAT-1D was damaged in the incident. "After the antenna comes, the satellite has to go through a series of tests. They cannot be compromised. Even if you change a screw, the spacecraft has to be tested. After the arrival of the antenna, its pattern has to be tested because it has to radiate towards India. It has to be made exactly like the previous one. You cannot have somebody (some other country) objecting that it is pointing towards them. The carbon-paper antenna takes time to make. Otherwise, the satellite is all ready. Six of the 12 C-bend transponders are fed by this antenna. The most optimistic date for launching will be March and the most pessimistic is June," Mr Rao said.

Knowhow From Britain

46001018 Madras THE HINDU in English 9 Sep 89 p 10

[Text] Bangalore, Sept 8—The Indian Space Research Organisation (ISRO) has sought transfer of technology with regard to the pressurant helium tanks which from part of the liquid propulsion system in satellites, from the British Aerospace Systems and Equipment (BASE) for its INSAT-II series of satellites. The tanks are usually spherical and are made of titanium metal or titanium alloys which carry helium under pressure. These are connected to the liquid oxidizer and fuel tanks through pressure valves. The pushing action on the oxidizer and fuel is achieved by a controlled release of helium into the respective tanks.

The technology is a specialised one and the British company, which was given the contract by the ISRO to supply six such tanks for the initial phase of the INSAT-II spacecraft project is one of the few companies engaged in the field. The officials of the company were here recently when technology transfer was discussed. It is learnt that the BASE is, in principle agreeable to the proposal, but it has to obtain clearance from the seven-nation embargo on missile related technologies.

Second generation: The INSAT-II series constitutes the second generation of the INSAT satellites to be entirely designed and built in the country. Before INSAT-II comes into the operational phase two "spaceworthy" test spacecraft (TS), at a sanctioned cost of Rs 403.8 crores, including the launch costs, are to be fabricated to demonstrate and test the indigenous design. The INSAT-II (TS) will be identical in configuration as well as service capabilities to the INSAT-II operational satellites.

Originally the helium pressurant tanks, two of which will be used in each INSAT-II satellite, were to be fabricated indigenously. The indigenous design was based on titanium alloy tanks with Kevlar windings to give it strength

to withstand the high pressure of helium inside. However, this did not prove successful because it was found that the tank became heavy. Weight considerations being critical—the satellite is designed to weigh about 1900 kg at lift-off and 860 kg in orbit—it was decided to go in for imported ones.

An American firm was identified first, but the company refused to comply with the request for fabricating a demonstrator tank first, with the ISRO specifications, before firm orders would be placed with it. The British firm, on the other hand, agreed to this condition and recently carried out the demonstrator project successfully. The order for six tanks is worth $500,000. The deliveries are expected to be completed during 1989—in time for the launch of the first Insat-II (TS), which has been signed for between October 1, 1990 and September 30, 1991 with Arianespace.

Unrealistic: It may, however, be remarked here that this committed launch date is highly unrealistic because even the structural model (SM) and electrical thermal model (ETM), that precede the actual flight model (FM), have not yet been completed for the test spacecraft. Nominally, these exercises take about two years for complete validation. IN this case, in fact, the situation has been compounded by a mishap on the SM around the same time as the INSAT-ID accident in the U.S.

Like INSAT-I, INSAT-II will also be a multipurpose spacecraft with enhanced capabilities. In order to meet the additional requirements, based on 15 per cent per annum growth rate of services which it is intended to provide the satellite will include some new features designed to exploit the so-called "extended C-band" apart from making use of the normal C-band transponders.

The normal C-band range is in the downlink with a corresponding uplink. The extended range will include the upper portion 4.5-4.8 GHZ of the C-band as well for the downlink (with the corresponding uplink). With the usual 40 MHZ bandwidth for each transponder this can accommodate an additional six C-band transponders.

The allocation of this C-band range for civilian satellites was made only recently in 1983 by the international authority concerned and INSAT-II will be the first satellite to have the opportunity of using these additional frequencies.

Telecommunications Accord Signed With Pakistan

BK2309161589 Delhi Domestic Service in English 1530 GMT 23 Sep 89

[Text] India and Pakistan today signed an agreement for the introduction of digital transmission between Lahore and Amritsar. The agreement also provides for augmenting trunk circuits to meet the increasing demands of manual and international subscribers dialing traffic. It was signed at the sixth Indo-Pakistan telecom operational coordination meeting which concluded in Bombay today. India also offered Pakistan transit facilities for manual or public switch traffic through its territory to neighboring Nepal, and Bangladesh.

Television Transmitter Inaugurated in Aijal

BK2309164889 Delhi Doordarshan Television Network in English 1600 GMT 23 Sep 89

[Text] A new high-power one-kilowatt television transmitter started functioning in the Mizoram capital, Aijal, today. The information and broadcasting minister, Mr H.K.L. Bhagat, inaugurated the new transmitter. It will cover areas in a radius of 50 km.

Speaking to newsmen in Aijal this evening, Mr Bhagat said Doordarshan will soon start a three-tier program service in the northeastern region. He said over 51 crore rupees have already been earmarked for this expansion program.

Rajasthan Television Relay Center Commissioned

BK2709060089 Delhi Domestic Service in English 0240 GMT 27 Sep 89

[Text] The minister of state for information and broadcasting, Professor K.K. Tiwari, has called upon the people to preserve the historical heritage and the dynamic civilization of the country. Commissioning a Doordarshan [television] relay center at Dig in Bharatpur District of Rajasthan yesterday, he said information and entertainment are the two most important aspects of Doordarshan. Professor Tiwari said a great change is taking place with the advent of television which now covers 75 percent of the country's population.

International Gateway Switched Data Service Inaugurated

55500003 Madras THE HINDU in English 9 Sep 89 p 3

[Text] Madras, Sept 8—An international Gateway Packet Switched Data Service (GPSS), offered by Videsh Sanchar Nigam Limited (Overseas Communication Service) from Madras, was inaugurated here today.

The GPSS will provide data communication between computers and data terminals worldwide. It will provide a person with access to the data networks distributed over the globe for information retrieval, exchange of data or dissemination of information.

The list of applications of the GPSS is numerous: software development, electronic mail, airlines reservations, inter-company communications, electronics fund transfer, information retrieval, design information, etc.

As Mr K. K. Ramaswamy, Chief General Manager, Madras Telephones, inaugurated the GPSS from Madras and sought information about the "Agni" missile from a U.S. data network, the following information was flashed on the computer screen within minutes: "India's Defence Research and Development Organisation has formed a consortium of research laboratories and other

institutions to produce components for Agni missile. The step was taken to counter any embargo by western countries following the success of the missile, the Press Trust of India reported on June 9."

According to the Videsh Sanchar Nigam Limited (VSNL), the GPSS will be useful for businessmen in India doing business abroad, in exporting software, for handling messages and in computer-to-computer communication.

Thus, information from all over the globe is available to those who need it, through the tele-communication network. The fee for using the GPSS is low compared to other methods and the time taken to transmit or retrieve the messages is also less. For example, if a person wants to send a message of 9,000 characters at 1,200 bits per second, it will take only a minute to transmit it and the charge will be Rs 34. But the same message by telex will take 24 minutes for transmission and the cost Rs 576.

Error-free service: Mrs Lakshmi G. Menon, Chief General Manager, VSNL, Bombay, aid the GPSS would provide links to 100 data networks in 70 countries. The data was switched and transmitted in characters called "packets" with high reliability efficiency and security. Thus, any loss or damage to information was insured. The service would be error-free. Another GPSS would be inaugurated in Pune shortly. The electronic mail would be available by December 1989, she said.

Mr Ramaswamy said the users of the GPSS in Madras would be connected to Packet Assembler-Disassembler (PAD) located in the Department of Telecommunications' office at the Harbour branch and further extended to the Packet Switched System at the Videsh Sanchar Nigam, Bombay.

Mr P. Kandiah, General Manager, VSNL, Madras, who welcomed the gathering, said the GPSS was already available to customers in Bombay, New Delhi, Bangalore and Hyderabad. This service was being extended to Madras.

Mr K. P. Tiwari, Deputy General Manager, VSNL, Madras, proposed a vote of thanks.

Two Major Telecom Projects To Await Indigenization

55500002 Madras THE HINDU in English 23 Aug 89 p 7

[Excerpts] New Delhi, Aug 22—The Telecom Commission has deferred two major projects—Vikram, a high speed Packet Switch Public Data Network (PSDN) and Gateway Packet Switch of Videsh Sanchar Nigam Limited (VSNL)—till such time as the indigenous industry is able to design and develop it in-house. Before the Commission came into being, the Department of Telecommunication (DOT) had announced that these two services would be launched simultaneously on April 1, 1990.

According to top Commission officials, now that C-DOT and ITI have successfully developed digital electronic exchanges, it is only a matter of time before both PSDN and Gateway Packet Switch are also developed indigenously. Though it is difficult to speculate on a definite time-frame, the officials are hopeful that it should be possible to have them operational in about 18 months.

In the case of Vikram, which was to be financed out of the ninth World Bank loan of $345 millions the DOT had floated a tender in June 1987 for the supply of equipment for the PSDN. Estimated to cost over Rs 16 crores, the proposed packet switch was to connect 20 cities to meet the data communication and data processing requirements of various computer users.

In response to the international competitive bidding (ICB) well known global telecom companies responded. They included British Telecom, Alcatel, Hughes Network, Telenet, Telecom Data Services, Siemens, Japan Radio Corporation, Network Automation Private Limited, Telefile and McDonnel Douglas.

Review of project: Bids were invited for supply of switching equipment and software including modems, multiplexers, power supply, batteries, etc. Subsequently, the DOT set up a tender evaluation committee which shortlisted Siemens and Alcatel for the job. The recommendations remained on file for a year or so and the former Minister of Communications, late Bir Bahadur Singh, had reportedly approved the Siemens bid. But just around this time the Telecom Commission was set up which decided to review the Vikram project.

As a follow up, the Commission arranged for a presentation on the subject in June last and the participants included representatives of the Department of Electronics and Computer Maintenance Corporation (CMC). A high level committee was set up to take an overall view of the proposed PSDN system. However, the committee itself got bogged down as the operators of Nicnet, Telenet, etc., staked their claim to run the Vikram network. At this stage the DOT stepped in and asked how the CMC or DOE could run the service when it owned and operated the circuits. It therefore contended that it is the one which should be operating the PSDN. Meanwhile, yet another claimant came on the scene, and that was the VSNL. The argument of VSNL was that since the traffic in PSDN would also include a fair proportion of international exchanges, it should run the service.[passage omitted]

Like Vikram, the much publicised Gateway Packet Switch of VSNL to be installed at Calcutta and funded by the Asian Development Bankhas also come under a cloud. After a decision was taken to place orders on Ericsson when the late Bir Bahadur Singh was at the helm. VSNL reportedly placed a letter of intent and was about to open a letter of credit. But just then, the Telecom Commission decided that the Gateway Switch could also be developed indigenously. Thus a committee was set up to go into this also. Meanwhile, the ITI has informed the commission that it would be able to make it by adapting Alcatel's E 10 B switch. Interestingly Alcatel itself did not quote for this particular ADB

tender as it felt that the E 10 B switch was not fit for such an adaptation. The C-DOT has also thrown its hat in the ring now.

With so many contenders and committees going into Vikram and Gateway Packet Switch, one does not know how long the country may have to wait. In any case senior Commission officials were 'optimistic' that India can hope to have indigenous versions of these two systems in about two years.

C-DOT exchanges: Alongside, the Telecom Commission has decided to place orders for manufacturing seven lakh direct exchange lines (DEL) based on C-DOT technology. The anti-Pitroda lobby has pointed out that so far not a single C-DOT exchange with over 2000 lines has been tried and tested, leave along the 10,000 line exchanges. With each line costing nearly Rs 5000, the investment on 7 lakh lines would be nearly Rs 400 crores. They said no one was against indigenous technology but then it should be fully tested before integration into the main system. The criticism was that even the Bangalore (Ulsoor) and Delhi Cantonment exchanges were largely residential and only when they were tried out in heavy traffic commercial areas could one form a firm opinion. They said the C-DOT exchanges should be tried out in Connaught Place in Delhi or Anna Salai in Madras.

They said when the cross bar and E 10 B exchanges were installed they were subjected to field trials for over one year. In the case of C-DOT, while the field trials were carried on for a long enough period, the capacity tested was much smaller.

IRAQ

Earth Station Provides ARABSAT Link

55004537 Baghdad BAGHDAD OBSERVER in English 8 Aug 89 p 2

[Text] Ministers of Transport and Communications of the Arab Cooperation Council (ACC) member-states on Monday inaugurated a new Iraqi earth station to be linked with the Arab satellite, ARABSAT.

In an address on the occasion, Iraq's Minister of Transport and Communications Muhammad Hamzah said the new earth station was a major achievement to facilitate inter-ACC communications.

The earth station will operate on various channels to transmit TV and radio programmes and other communications, said the Minister.

The station will also enable Iraq to receive the transmissions directly from ARABSAT. Until now, Iraq used to receive the transmission via Jordanian earth station.

The station, named Al-Nasr (Victory), cost 4,730,000 Iraqi dinars.

The ACC Ministers are meeting in Baghdad to discuss cooperation between their ministries as part of endeavours to achieve greater integration between the four member-states, Iraq, Egypt, Jordan and North Yemen.

EUROPEAN AFFAIRS

Results of EC Telecommunications Council Meeting

AN890329 Brussels EUROPE in English 14 Sep 89 pp 9-10

[Report on "informal" Telecommunications Council meeting: "Council President Pleased, Especially About 'Postal Europe'; Cleavage Confirmed on Degree of Liberalisation of Telecom Services"]

[Text] As the work of yesterday's informal Telecommunications Council meeting wrapped up, the current Council president, French Minister Paul Quiles, expressed satisfaction. He said that the meeting had been fruitful, and that the ministers had taken some important decisions and reached some vital points of understanding. Looking through the agenda, Mr Quiles noted the following conclusions:

Postal Europe: The president felt that having this item on agenda was a "political success," since it is the first time that the subject has been looked at on Community level. This topic was discussed in detail during the meeting. Mr Quiles laid particular stress on:

- the delegations' acknowledgement that within postal activities, there are services that must remain in the public domain, while others could be opened up to competition (the distribution by type of activity was not discussed);
- the creation of a group of high-level officials, the SOG-P (Senior Officers Group-Post), which will be set up based on the Telecom group model; and
- the future Green Paper on postal services in the EEC, which will define the actions of general interest on Community level.

Telecommunications Services: The president admitted that the long discussions on this subject had shown that the Member States were far from agreeing on this file as a whole, although a consensus was reached on the maintenance of certain exclusive rights of monopolies and the fact that the harmonisation of standards and the "desirable and hoped-for" liberalisation of value-added services should go hand in hand. In contrast, a split remains regarding the scope of what can be left to the monopolies as value-added services. The majority of the Member States felt that some services of this type (transmission of data and the Integrated Services Digital Network) must remain under the control of the monopolies, while a minority (in particular, the UK) feel that all services should be open to competition, except for voice telephony. Closely related to this basic divergence is a legal divergence on the competencies of the European Commission in taking liberalisation measures on its own.

Non-regulatory proposals on cooperation initiated by the presidency: These will be studied by the Commission after the go-ahead has been received from the delegations, which made the following proposals in preparation for the 1990 Europe of Telecommunications:

- Continuation of the RACE programme on Community level of "life-size" projects in order to introduce integrated broadband communications (IBCs), but based on another type of action than the Community programme, due to the costs and trade parameters which must be taken into account for these projects.
- A EUREKA type initiative to define the multimedia terminal of the future (actually, the telephone of tomorrow, which will make it possible to receive data, the visiophone, etc.) in conjunction with the development of ISDN.
- The use of the ECU in the EEC for transactions between telecommunications administrations to replace SDRs (special drawing rights). The role of the ECU could only serve to make the existence of the EEC more real.
- Cooperation between economic operators to facilitate the creation of European scale services. The German delegation proposed the creation of a European research institute on telecommunications.

In conclusion, the minister—who made note of his admiration for the French post, telephone and telegraph (PTT) service—said he felt that the Cap d'Antibes meeting had made it possible to define a basis for a compromise on telecom services (but not the compromise itself, he specified) and, thus, in particular terms, the areas of consensus and the necessary steps for Europe of Telecommunications.

Institutional Roadblock Due to Divergence Between Most of the Council and the European Commission on the Latter's Competencies—a Conciliation Procedure?

In his press conference, the Council president was very firm on the subject of the legal problem that separates most of the members of the Council and the European Commission regarding the Commission's intention to take decisions by itself on liberalising telecommunications by means of a directive based on Article 90, Paragraph 3 of the EEC Treaty. Mr Quiles feels this is an institutional problem: "It is up to the political organ of the EEC, i.e., the Council, to define the speed of European construction and to be the definitive forum where this takes place." In Mr Quiles' opinion, this matter has come to an "institutional roadblock."

The ministers suggested a conciliation procedure under which the two commissioners in charge—i.e., Vice Presidents Pandolfi and Sir Leon Brittan—would meet with the troika—i.e., the current Council presidency (France), the future presidency (Ireland), and the past presidency (Spain)—to look for a solution. Mr Quiles declared that, should the Commission refuse such a procedure or should the said procedure fail, there would be an open conflict and the matter would be referred to the Court of Justice.

The meeting's "conclusions" invite the Commission to reconsider its position and approve the conciliation procedure mentioned (see below points 8 and 9).

The Presidency's Conclusions on Behalf of the Ministers in Attendance

At the end of the meeting, Mr Quiles drew the meeting's conclusions. Here is the text:

The ministers in charge of telecommunications:

1. Underline the need to conduct a policy within which liberalisation and harmonization go hand in hand, and stress in that respect the close link existing between the Commission's draft directive concerning competition in telecommunications services markets and the revised draft Council directive concerning the establishment of the single market in the telecommunications services market through the "Open Network Provision".

2. Note that consensus exists between the Member States:

- To maintain the possibility of retaining exclusive or special rights for network infrastructure and telephone services,
- To initiate the liberalisation process through the immediate opening to competition of added value services (bulk and circuit data transmissions not being included in that category);
- To initiate the harmonisation process by elaborating the use and access conditions applicable to rented circuits and to telephone service in accordance with the provisions of the ONP framework directive once the latter has been adopted;
- To formulate, through Council directives, a joint policy concerning satellite and mobile communications;

3. Consider that data transmission services, as well as ISDN, are services of European interest, in accordance with the resolution adopted on 30 June 1988;

4. Agree to implement without delay a first phase of the single market in telecommunications services, consisting in opening the liberalisation process by the immediate opening to competition of added value services (bulk and circuit date transmissions not being included in that category);

5. Agree to review the situation between now and 31 December 1992, in particular concerning services, by taking account of the progress achieved within the ONP framework and the situation of the telecommunications services market, in order to implement the single market in that sector by 1 January 1993. For certain countries, that implementation might imply the full liberalisation of data transmission services by that date. For others, the eventual liberalisation of these services might be postponed beyond 1993;

6. Consider that the common work of Community authorities and their agreement concerning the content of the measures to be implement are required in order to guarantee the success of the policy defined in the resolution of 30 June 1988;

7. Feel, as regards a large majority of them, that the use of Article 90 (3) of the Treaty is not the appropriate means to encourage the cooperation in question and that joint action, based on the spirit of Article 100A should be used to reach that objective;

8. Invite, therefore, the Commission to reconsider its position in order not to jeopardize the spirit of understanding and cooperation that must be the main feature of the Community's action in the area of telecommunications;

9. Approve the Pesidency's proposal to establish a concertation structure between the Council and the Commission, including the Presidency, Spain, Ireland and the Commission, in order to formulate suggestions to rapidly achieve progress on these bases toward a political compromise, which takes account of all the members' opinions.

TEDIS Telecommunications Conference Summarized

89AN0322 Luxembourg IES NEWS in English Aug 89 p 9

[Report by R. Wakeling of Directorate General XIII/D/5 of the EC Commission on the conference on Trade Electronic Data Interchange Systems (TEDIS), held in Brussels on 12-13 July 1989]

[Text] Over 200 participants attended a conference in Brussels on 12 and 13 July to review the progress of the Commission's TEDIS programme and to listen to representatives from the automotive, banking, chemical, insurance, retail, and transport industries explain how the use of Electronic Data Interchange (EDI) was expanding in their respective industries.

In his opening speech, Mr Michel Carpentier, director general for telecommunications, information industries, and innovation (DG XIII) of the Commission, expressed his pleasure at welcoming so many participants from different industries. He assured them that the Commission would be proposing the continuation of the TEDIS programme beyond the end of 1989 and that it would continue its support for UN/EDIFACT[1] standardisation of EDI messages. He also stressed the importance of the modified directive on open network provision (ONP) and of the directive under Article 90 of the Treaty of Rome, which will allow independent undertakings to compete with the member states' telecommunications monopolies in offering new services such as EDI on the telecommunications network.

On the first day of the conference, members of the TEDIS team presented the results of a series of workshops held in June to examine legal, telecommunications, and security issues. Some 150 experts took part in these workshops, which looked in detail at what has still to be done to

encourage the take-up of EDI throughout Europe. The reports from these workshops will be taken into account as the proposal for the continuation of the TEDIS programme is drawn up over the next few months. Some preliminary findings from a survey of awareness of EDI throughout the Community were discussed.

The second day was devoted to presentations from industry user groups: ODETTE [Organisation for Data Exchange by Teletransmission in Europe] for the automotive industry, CEFIC-EDI [European Council of Chemical Industry Federations-EDI project] for the chemical industry, EDIFICE [EDI Forum for Companies with Interest in Computing and Electronics] for the electronics and computing industry, EAN [International Article Numbering Association] for the retail and wholesale trades, RINET [Reinsurance and Insurance Network] for the insurance sector, as well as representatives from the transport and banking sectors.

Amongst these groups of users there was a common feeling that now, with the stable standards provided by UN/EDIFACT, it was possible to build EDI systems that bridged across different industries and across all the member states. This made it all the more important to resolve outstanding issues which hindered the development of EDI.

The rapid growth in the spread of EDI was illustrated by the announcement of two new user groups. EDIGLASS and EDIMETAL are new European industry sector EDI user groups for the glass and metallurgical industry, respectively. They have the support of enterprises in all the member states and also from countries outside the Community.

Mr Etienne Dreyfous, chairman of the UN working party responsible for UN/EDIFACT, drew a number of conclusions from the two-days discussion. He said that users called upon the Commission to continue its effort to raise public awareness of EDI, to continue its support for standardisation, and to remove legal obstacles to trade by electronic means. European industry, commerce, and public administrations needed secure and transparent telecommunications services, and he asked the Commission to support projects which were transnational and broke down the barriers to EDI between different industries and between the public and private sectors. The Commission must also ensure the needs of small and medium-sized enterprises and of developing countries were not forgotten.

Footnote

1.UN/EDIFACT: A set of standards developed within the United Nations for Electronic Data Interchange For Administration, Commerce and Transport. The EDIFACT Board is being granted Associate Body Status with the European Standardization Committee (CEN). Some of these standards are already ratified as international and European standards.

CANADA

Northern Telecom, BC Tel Form Joint Venture Company

55200055 Ottawa THE OTTAWA CITIZEN in English 1 Sep 89 p D6

[Text] Vancouver (CP)—The B.C. Tel Group and Northern Telecom signed an agreement Thursday to form a new company in the global telecommunications field.

The new company, as yet unnamed, will be based in Burnaby, B.C., said B.C. Tel spokesman Jim Cameron.

It will focus on control and maintenance of telephone switching networks and the sale of transmission equipment that improves use of communications systems, Cameron said.

The company will be 51 per cent owned by Northern Telecom and 49 per cent by the B.C. Tel Group. It will have more than 350 employees.

In a related agreement, the two companies announced that Northern Telecom will acquire the switching business of Microtel, B.C. Tel's manufacturing subsidiary, including the Brockville, operations.

The Brockville subsidiary will be operated as Brock Telecom Ltd., a division of Northern Telecom Ltd.

CRTC Annual Report Discusses Tasks, Issues

55200001b Toronto CANADIAN COMMUNICATIONS REPORTS in English Vol 16 No 16, 31 Aug 89 p 2

[Text] The CRTC has some comforting news for Ottawa in its annual report for 1988/89. Once again, it was a net generator of revenues for the government—and will continue to be into the future. In 1989/90, for example, the agency expects to collect $60 million in license fees from broadcasters and telecom carriers while its budgetary allocation over the same period is forecast at $29.6 million.

At the same time, the Commission's workload has increased. It received 3839 application last year, up from 3703 in 1987/88.

The heavy duty items on this year's broadcasting agenda will include a review of all FM radio policies, cable policies and rate regulations, cable's community channel, and northern and native broadcasting.

On the telecom side, the major ongoing issues which confront the Commissions are the degree of competition, if any, that should be permitted in traditional monopoly markets, "the entry and behavior of regulated carriers in emerging markets such as electronic publishing, and the rules governing the behavior of regulated carriers in competitive markets," said CRTC Acting Chairman Bud

Sherman. As well, the Commission has begun a review of its regulations governing competition in the resale and sharing market.

Under Keith Spicer, named CRTC Chairman on June 29, the Commission will also have to contend with the landmark Supreme Court's AGT decision and the anticipated Rogers/CP application to permit competition in the long distance telephone market.

FINLAND

Continued Debate on Tele-X Usage

55002492c Helsinki HELSINGIN SANOMAT in English 7 Sep 89 p 2

[Editorial: "Cooperation on Television Programming Grinds to Halt"]

[Text] When the joint Nordic Tele-X satellite was scrapped, the Governments of Sweden and Finland promised to try to broaden cooperation on television programming between the two countries. Much less money than the Tele-X would have required will go a long way here. Our government quickly decided to build link stations on the coast. Since last December, people on both sides of the metropolitan area have been able to watch live broadcasts of Swedish television programs via cable. When the new link stations are finished, the coverage area will expand along the Swedish-language coast.

Finland has expected Sweden to strive correspondingly to expand the coverage area of Finnish television programs from the Stockholm region to the most important Finnish areas in central and western Sweden. Unfortunately, the Swedes have not set out to do this. On the contrary, in Uumaja, where a lot of Finns live, it was decided to drop Finnish television entirely from the cable channels. The decision is hard to justify on the basis of small viewership and uncommon language as long as the people of Uumaja are offered Russian-language and French-language stations.

Minister of Education Christoffer Taxell reacted with commendable swiftness by dispatching a letter to his Swedish colleague. Taxell also understands that the Swedish practice could easily turn Finnish opinion against Swedish television programs, for the mere coverage of which Finnish viewers must pay a higher television-license fee. Uumaja's cable company is subordinate to Sweden's telecommunications office. Understanding all the commercial factors, Finns have a right to expect that, in a Finnish center as large as Uumaja, people should be able to watch Finnish television.

Officials Report on Telecommunications Situation, Plans

55002492b Helsinki HELSINGIN SANOMAT in Finnish 5 Sep 89 p 30

[Article by Esko Nurmi: "Telecommunications Networks Make Up 1.6 Percent of Finland's National Product; European Community Strives for 7-Percent Share by Year 2000"]

[Excerpts] The share of telecommunications in Finland's gross national product is 1.6 percent. This is the key fact in the copious telecommunications statistics the Ministry of Communications just released for the first time.

It has not been possible to figure into this GNP share the sales of data terminal equipment by private firms. Reliable statistical data have been obtained only from regional telecommunications companies and the National Board of Postal Services and Telecommunications (PTL).

The share of telecommunications in the gross national product would apparently remain at slightly under 2 percent, even if all the odds and ends were included.

The figure does not seem large. The European Community, which now struggles along at about the same level, intends to raise that share to 7 percent by the year 2000. The EC estimates that, by that time, 6 jobs out of 10 will depend directly on the use of telecommunications.[passage omitted]

Besides, gross national product share may reflect something other than the field's growth. An example of this is from the year 1976, when, according to statistics, the gross national product share positively skyrocketed. But the explanation is prosaic: Miettunen's emergency government raised the telephone rates sharply in order to put money into the state's cash register.

World's Number Two in Cordless Phones

Cordless telephone service was the subfield of telecommunications that grew fastest last year. Customers increased by 30 percent. Finland is second in the world only to Norway in frequency of cordless-telephone use.

In proportion to the number of inhabitants, Finland is sixth in the world in the number of ordinary telephone customers. Last year there were 2.47 million of them. The growth rate was more than 4 percent over that of the previous year.

Previously, statisticians also kept track of telephone sets. This has proved to be impossible, however, because nowadays telephones are sold everywhere, even in dairy stores.

It has become just as easy to sell other data terminal equipment—for example, modems and telefacsimile. Just under 17,000 telecopying devices supplied by PTL and regional telecommunications companies were used last year, but evidently the same number of such devices was obtained from other sources.

There are no longer any big differences in telephone density between various parts of the country. On the other hand, use of the newest telecommunications services is clearly concentrated in the south, especially in the capital city region.

Yet the most advanced networks seem to be in western Finland. In Turku, Pori, and Vaasa Provinces, as well as on the Aland Islands, the share of digital telephone subscriptions is about 40 percent. Thickly settled Uusimaa has just reached 10 percent.

Does PTL Give Cheaper Service?

In the telecommunications statistics, there are no tables to indicate regional differences in telephone charges. In the opinion of the Telephone Companies' Alliance, a coalition of regional telephone companies, the book of charges is too thick to cram into concentrated statistics. For his part, PTL department head Karl Tavaila suspects that in this instance the regional companies are "doing a little teasing" in the spirit of past telecommunications wars. [passage omitted]

There is also disagreement over how to interpret the relationship of investments to sales. The regional companies invest much more than they sell. In the opinion of the Telephone Companies' Alliance, it must be remembered that "overcharging" for long-distance calls is increasing the PTL's revenues. PTL sales in 1988 were slightly under 4 billion Fmk. The telecommunications network brought in almost 1.5 billion of that.

The sum total of regional telecommunications companies' sales was 3 billion Fmk. According to the statistics book, 1.3 billion Fmk accrued from "other sales earnings," without a more precise breakdown. [passage omitted]

First Videophone Center Begins Operation

55002492a Helsinki HELSINGIN SANOMAT in Finnish 29 Aug 89 p 11

[Article: "Finnish Videophone Center Makes Teleconferences Possible"]

[Text] Tampere—Finns have developed a videophone center that is linked to the ordinary telephone network. With the center's help, an ordinary videophone connection between 2 persons can be expanded to include up to 16 persons.

For teleconferences, at least one microcomputer, by which the desired picture is chosen, is needed in addition to the videophone. The other conferees have a videophone on whose fist-sized screen they see diagrams or other enhanced graphics and the speaker chosen by the microcomputer owner. A monitor the size of a television screen reproduces a bigger picture.

A call is made practically the same way it is with an ordinary telephone. First, the videophone center's number is dialed, and the caller's face appears on the device. After this, the picture chosen by the microcomputer owner appears on the monitor. The voice of each speaker is heard in all the telephones, but transmission of one's own picture to the other conferees can be avoided by covering the eye of the camera on the device.

Japanese Outdone by Digitization

The picture transmitted by telephone is constructed frame by frame, like a cartoon. The picture is not of particularly good quality; it jumps and jerks. A trial call from Tampere to Helsinki showed that distance does not affect the picture's quality.

The center has been developed by the Tempere Telephone Cooperative (TPO) and by the Espoo-based Vistacom Industries, which makes videophones. Also involved in the experiments are Omnitele, representing the telephone companies, and Tekes, serving as bankroller.

TPO decided to choose the digital devices in 1979. Thanks to this decision, the Finns are able to outstrip the Japanese, for example, because the videophone center is the first of its kind in the entire world.

"Digitization improved and speeded up communications, and we've been able to reduce the price of phone calls. The next stage is development of a multiservice network with videophones and facsimile transmission," says TPO general manager Erkki Ripatti.

The videophone costs 58,500 Fmk, and the price of the microcomputer plus software is about 4,000 Fmk. The telephone connection itself costs the same as an ordinary phone call, but the cost of running the center's equipment has not yet been determined.

The manufacturers exhibited experimental copies of the center in Tempere on Monday. The prototype and, at the same time, the first functional center have been installed in the TPO's digital telephone exchange. The apparatus goes on sale at the start of next year. The manufacturers promise that by the end of this year teleconferences will be held in both Finland and France, where the network equipment makes it possible to use the device.

FRANCE

Government Funds for High Definition TV

55002485a Paris LE QUOTIDIEN DE PARIS in French 24 Aug 89 p 9

[Article by Francois Labrouillere; first paragraph is LE QUOTIDIEN DE PARIS introduction]

[Text] The Ministry of Industry next year will grant Fr 240 million for the development of high definition television (HDTV). However, the difficulties of the first European television satellites bode ill for the future of the D2 Mac [multiplexed analog component] standard supported by France.

Yesterday the Industry Minister, Roger Fauroux, chose the occasion of the opening this week in Berlin of the International Hall of Sound and Video, the largest public electronics exposition in Europe, to reveal his policy for television standards before the Council of Ministers. The television of the future—called high definition television by specialists because the number of lines making up the picture will be somewhere close to twice the 625 lines of the present European Secam [Sequential Memory Color] and Pal [phase alternation line] standards—is the big prize of the end of the century for the leisure electronics industry. A cinemascope screen and pictures approaching movie theater sharpness; compact disc quality digital stereo sound; larger, flatter televisions: The HDTV revolution promises to rival the transition from black and white television to color.

It is a colossal market of tens of billions of francs for the manufacturers. All equipment, without exception, from cameras to control rooms to television sets, will be redesigned within the next 10 or 15 years. These forecasts already whet the appetites of the industry giants, names like Sony, Hitachi, Philips, and Thomson, who are all jostling for domination. The battle will take place essentially in the arena of standards. The CCIR, the International Radio Consultative Committee, is supposed to rule next year on adopting a single worldwide standard for HDTV.

Just as the appearance of color television in the midsixties saw a confrontation among France's Secam, Germany's Pal, and the NTSC [National Television Systems Committee] of the Americans and the Japanese, so the developmwent of HDTV will pit against each other the European D2 Mac standard (Thomson and Philips), the Japanese Muse [Multiple Sub-Nyquist Sampling Encoding] Hivision, and a hypothetical, not yet pinned down American standard.

Major Challenge

"High definition television is a major challenge for the French electronics industry and the European Eureka program," the French industry minister reaffirmed vigorously yesterday. To prove his good will, he has promised to double the funds budgeted for HDTV, allocating Fr 240 million to French manufacturers in the sector (Thomson principally).

After the prototype phase, the minister wants the makers to jump to the real thing. "The maufacturers," he says, "should now develop products for mass production to satisfy the requirements of audiovisual production companies and ultimately the authorities."

Talks are underway, Roger Fauroux has announced, which should result by mid-1990 in the ultimate phase, "more expensive and therefore naturally more ambitious," of the European Eureka EU95 project. The industry minister is also announcing an active French policy "to have the international authorities embrace the European norm; to prevent the United States from adopting the Japanese standard; and to convince the natural allies of Europe, such as the USSR, China, Australia, and Africa, to rally to its standard."

Gray Areas

It may be that these efforts will be too little to assure the manufacturers of victory in the HDTV wars. Many gray areas still shadow the Europeans's D2 Mac standard. First, in contrast to the Japanese competition, there does not now exist a real HDTV norm (the picture is still composed of 625 scanlines) but rather a "larval version" of the future European high definition which awaits a second stage of development. The Japanese, however, have plunged ahead.

Since last 3 June, NHK, Japan's public television, has been broadcasting full blown HDTV for an hour a day on an experimental basis, and equipment built to Japan's Muse standard is already turning up quietly in the production studios of the major worldwide television networks.

The direct television broadcasting satellite TDF1, on which France was counting to establish the D2 Mac standard, is also far from fulfilling its promise, to put it euphemistically. Going on a year after its launch last December, the satellite, which cost billions, still malfunctions. La Sept [Channel 7] the new public channel broadcast by TDF1, is doubtless the only worldwide television without viewers!

Faced with a lack of enthusiasm on the manufacturers' part, the PTT [Postal and Telecommunications] minister had to take things in hand, ordering in the spring from Radiotechnique (the French subsidiary of Philips) 750,000 D2 Mac TDF1 decoders, which will not be available until the start of the new year! This plus the lack of enthusiasm of television viewers for the programs on the other European satellites makes the future of the D2 Mac standard look rather hazy for the time being. There is one consolation: Mikhail Gorbachev seemed to enjoy very much a demonstration of European HDTV last July at the Elysee. History does repeat itself. The USSR was also one of the few major foreign countries to adopt France's Secam for its color television!

Matra Chosen for Locstar European Satellites

55002485b Paris TELECOMMUNICATIONS in French 5 Aug 89 pp 10-11

[Text] The Locstar company has finally accepted a bid from the French manufacturer Matra to lead the construction of two satellites for radiodetermination and mobile radiocommunication under the Locstar program launched by CNES [National Center for Space Studies] last October (see TELECOMMUNICATIONS, Number 46). This program brings to 26 the number of communication satellites produced by Matra's Space Division, 12 of which are still to be launched. For this first international service of radiodetermination and interactive mobile communications via space, Matra based its technical proposal on the Eurostar platform, developed with British Aerospace, which was already selected for the Telecom 2 and Inmarsat

[International Maritime Satellite Organization] 2 programs. It is the most modern now available. It accommodates a satellite of 1350 kg at takeoff. Matra also brings a very polished industrial organization including British Aerospace (for Eurostar), Marconi Space Systems (for the payload repeaters) and Selenia Spazio (for the L- and S-band antennas). Aerospatiale, Casa, Dornier, Fokker, and others are also involved. Locstar thus contributes a large share to European manufacturers, the national share adding up to 50 percent.

Matra Chosen for Hispasat Satellite Communications

55002485c Paris TELECOMMUNICATIONS in French 5 Aug 89 p 11

[Text] At the same time, Matra was also chosen, following an international bid process, by the Spanish government to lead the Hispasat satellite communication (television and telephone) system. For a figure above Frl billion, the contract calls for building two satellites and their control centers. Also based on the Eurostar platform, these are multimission satellites of 1900 kg at launch, with the capability of providing direct television broadcasting services for Spain, telecommunications and television for Spain and Western Europe, rebroadcast of a television channel toward the American continent, and governmental communications. A third of the satellite equipment will come from Spanish companies (Abengoa, CASA, CRISA, ERIA, INTA, MIER Communicaciones, RYMSA, SENER and Tecnologia), some of whom are already Matra partners in the European Ariane, Hipparcos, and Telecom 2 programs. A third satellite is included as an option.

Matra Firm in Pan-European Radiotelephone Network

55002490b Paris LA TRIBUNE DE L'EXPANSION in French 7 Sep 89 p 11

[Article by Veronique Groussard]

[Text] One after the other, countries are choosing the suppliers who will provide them with the future-generation radiotelephone which is planned for the end of 1991 and which goes by the sweet name of "pan-European digital radiotelephone" (GSM).

The latest to do so are Spain and Italy. They announced yesterday that they had selected the consortium consisting of Sweden's Ericsson, France's Matra Communication, Italy's Telettra (a subsidiary of Fiat), and Great Britain's Orbitel (a joint subsidiary of Racal and Plessey). That consortium, which has responded to 7 out of 11 invitations to tender in Europe, has already sewn up Great Britain, Switzerland, and France, while Belgium and Portugal have not yet made a decision. In all, it will supply systems with an operating capacity of 125,000 subscribers.

Although no financial details have been revealed concerning the amount of the orders, the contract is described as "sizable." The system chosen by Spain's Telefonica will cover the city of Barcelona. In the medium term, the infrastructure should total 10,000 lines. For its part, the Italian operating company SIP [Italian Telephone Company] has selected two systems, one preoperational and the other operational. The latter will serve 40,000 subscribers.

In fact, the game is a complicated one because the manufacturers have all joined the fray through European consortiums. Three other groups have confronted each other in most of the plays: one consisting of the AEG [General Electricity Company], Alcatel [Alsatian Company for Atomic, Telecommunications, and Electronic Construction], and Nokia, another being the group centered around Siemens, and, lastly, Motorola. The stakes justify going to some effort, because the manufacturers are in fact creating their business of the future. The pan-European project is counting on 10 million subscribers—10 times more than at present—by the year 2000. Moreover, the manufacturers are hoping to get a head start in order to sell their own mobile telephones down the road. But when it comes to that, everyone will be competing with everyone else.

Besides, forming consortia was a necessary step in view of the technological complexity of the systems involved and the related investments, which no single manufacturer is in a position to handle. In the consortium which has won in Italy and Spain, for example, Ericsson is in charge of the entire switching component, while Telettra, Orbitel, and Matra joined together in developing the "radio subsystem," meaning the ground stations, transceivers, and traffic control system. And depending on the country, the prime contractor could be any one of them.

Communications Channel on TDF-1 Satellite Lost

LD2709141189 Paris Domestic Service in French 1300 GMT 27 Sep 89

[Excerpt] TDF-1 has broken down; or at least one its five channels has come to a definitive halt. TDF-1 is the satellite launched last year on which the programs of La Sept are already carried, for example and also our two programs Hector and Victor. I regret to tell you that we are already deprived of Hector. Well, TDF-2, which was due to be the backup satellite, will be launched on 20 February, and we hope to recover one channel with that. [passage omitted]

Pay TV Network for Financial Information

55002490a Paris LE MONDE in French 8 Sep 89 p 10

[Text] By the end of September, financial professionals will have a European audiovisual network broadcasting raw financial information in real time by satellite. The Finsat (Finance and Satellite) company, established in 1986, has settled on the objective of enabling financiers to watch live TV coverage of key events taking place in the

various European capitals. The company has also signed exclusive agreements with the American network IRN (International Research Network) for the exchange of programs. Over 100 Wall Street firms subscribe to the IRN.

Using the French Telecom-1A satellite, Finsat will provide two kinds of programs, like a television channel: twice a day, there will be an hour-long presentation of news bulletins. Those bulletins, lasting from 5 to 10 minutes each and presented in the form of newsflashes, will be in English and French. News from the American and Asian markets will be presented from 0830 hours to 0930 hours, while the performance of the various European stock markets will be covered during a second hour-long segment lasting from 1430 hours to 1530 hours.

Between those two 1-hour segments, three types of programs to be produced by each country are planned: meetings of financial analysts; video presentations of listed companies in the context of an increase in capital, a press conference, or an institutional film; and broadcasts of investment conferences. Finsat plans to broadcast for 3 or 4 hours a day to begin with. The schedule will be presented at the start of the day in the form of brief spots. To receive Finsat, each financial firm will have to acquire a parabolic antenna and subscribe (200,000 francs per year, with a sliding scale of charges for additional receivers). The broadcasts will be encoded, so it will be necessary to install a decoder of the MAC family ensuring the confidentiality of the information provided, Gerard Lefebvre, one of the project's promoters, explains.

A 41.5-percent share of Finsat's capital is controlled by the firm's three creators: Bruno Chauvat, who has been chairman and managing director since April 1988; Boris Slulzinger, cofounder, director and general manager of the company; and Gerard Lefebvre, director of development for the Luxembourg Television Company, who is participating as a private individual and is a stockholder in and director of Finsat. The Expansion group holds a 36-percent interest through DAFSA, the Luxembourg firm of Satcom Investment owns 12.5 percent, and an international group whose name cannot be revealed owns 10 percent.

Startup is scheduled for the end of September. At first, eight European countries—Belgium, France, Great Britain, the Grand Duchy of Luxembourg, Italy, the FRG, the Netherlands, and Switzerland—will benefit from Finsat's services, as will the United States via the IRN network.

IRELAND

Contracts Signed for 11 New Local Radio Stations

55500004 Dublin IRISH INDEPENDENT in English 1 Sep 89 p 9

[Article by Claire Grady: "11 New Radio Stations To Hit the Airwaves"]

[Excerpt] At least 11 local radio stations are expected to come on the air over the next two months after a further five radio groups yesterday signed contracts with the Independent Radio and Television Commission.

Among the new contract-holders, Carlow/South Kildare Radio Ltd. is scheduled to be first on the air with a start-up date of September 15. Radio Kilkenny plans to begin broadcasting on September 30; Radio Limerick One Ltd. on October 8; Corrmuda Ltd., serving the Wexford area, comes on air on October 15; and Shannonside Radio Ltd., based in Co. Roscommon, on October 16.

Yesterday's signings at the Commission's offices in Dublin, brings to 15 the number of independent commercial stations which have contracts allowing them to begin broadcasting. Four, covering stations in Dublin, Cork, Galway and Mayo are already on the air.

Meanwhile, the first independent national station to be given a licence by the Commission has been beaten in the race to get on the air by Atlantic 252—the RTE/Radio Luxembourg venture—which begins broadcasting today.

The station, formerly known as Radio Tara, is broadcasting on the longwave frequency and is directed at the 15 to 35-year-old market throughout Ireland and Britain. [passage omitted]

First Rural Radio Station on Air in County Mayo

55500130 Dublin IRISH INDEPENDENT in English 24 Jul 89 p 5

[Excerpts] The first rural commercial radio station goes on air this morning in Co. Mayo.

MWR-fm will broadcast initially from Ballyhaunis, and Sligo-born presenter Adrian Eames will be the first vote on the network.

Additional studios will come on stream in Castlebar and Ballina when the necessary links are provided by the Department of Communications.

Behind the station are the Connaught Telegraph, the Western People, the Federation of Western Churches, North Connaught Farmers co-operative, the Board of Horan (Knock) International Airport, and the former pirate station, Mid-West Radio. [passage omitted]

Finance to the tune of £200,000 is available to the consortium and the projected income for the first 12 months will be in excess of £330,000. [passage omitted]

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